



Space and Beyond

K-5 Theme Week

Summer's Greatest Hits Science

Balloon Rocket



Materials:

- Drinking straw
- Paper rocket drawing-you design
- Balloon
- Tape
- String

- 2 chairs

Fewer materials option:

- Tape paper rocket to a balloon.
- Blow up balloon and let go!

Directions:

1. Draw a rocket and cut out.
2. Tape rocket to a straw.
3. Tape straw to balloon.
4. Push string through straw and tape ends of string to 2 chairs.
5. Blow up balloon and let go to see your rocket zoom!

Make it an experiment!

Try to answer the following questions:

- Does the shape of the balloon affect how far (or fast) the rocket travels?
- Does the length of the straw affect how far (or fast) the rocket travels?
- Does the type of string affect how far (or fast) the rocket travels (try fishing line, nylon string, cotton string, etc.)
- Does the angle of the string affect how far (or fast) the rocket travels?

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Balloon Rocket Follow Up



How It Works:

- As air rushes out of the balloon, it creates a forward motion called thrust.
- Thrust can be explained by Newton's Third Law of Motion, which states that for every action there is an equal but opposite reaction.
 - Thrust is a pushing force created by energy.
- In this balloon rocket experiment, the thrust comes from the energy of the balloon forcing the air out.
 - As the air is released out of the balloon in one direction, the force propels the balloon in the other direction.
- Different shapes and sizes of the balloon will create more or less thrust.
- In a real rocket, thrust is created by the force of burning rocket fuel as it blasts from the rocket engine - as the engine blasts down, the rocket goes up!

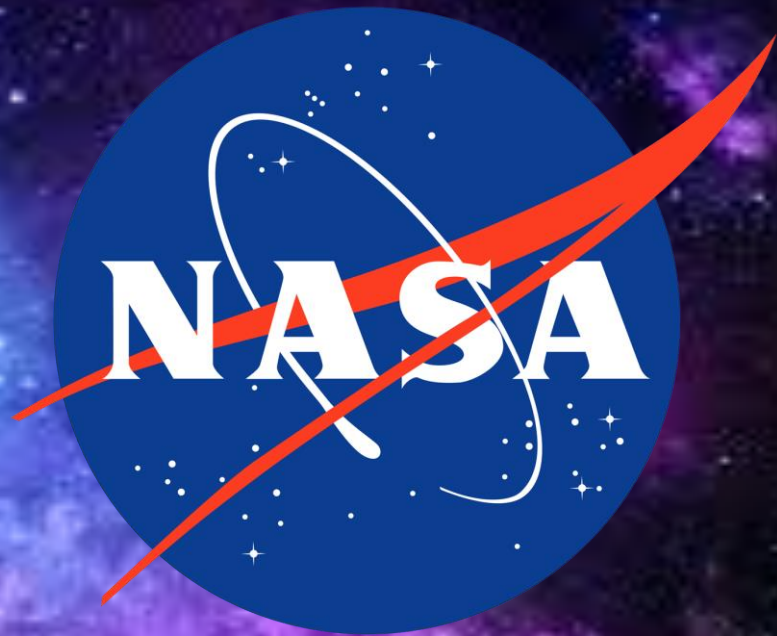
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Space and Beyond Links to Explore

[NASA Virtual Tours](#)

[NASA Activities For Students \(Grades K-4\)](#)

[NASA Activities For Students \(Grades 5-8\)](#)



Books to Explore



What can you learn about space?
Click on links above to login. Ask
your school librarian for
username and password.

Digital eBooks and Audiobooks
from Sno-Isle (Click on Picture to
check them out!) [Get Library Card](#)



Click to return to digital summer
reading resources.

Reading, Writing and Math

Check out the activities by grade below to support summer learning!
Summer's Greatest Hits activities can be repeated and practiced in any order.

[Kindergarten](#)

[First Grade](#)

[Second Grade](#)

[Third Grade](#)

[Fourth Grade](#)

[Fifth Grade](#)